The Transportation Planning Process for the Ward Street Widening EA
A Summary

Transportation plans for the County have long recognized the finite traffic capacity of the Ward Street corridor. Plans to provide future additional capacity with a new by-pass route have been considered for many years. There are two fundamental questions in developing this by-pass:

1. When will traffic "Demand" exceed the road capacity of Ward Street
2. What "Supply" must be provided to meet this future traffic demand

It is recognized that there are many dimensions to defining the "Traffic Capacity" of a travel corridor, particularly Ward Street with its multiple community access functions typical of smaller communities. The most objective measures are those taken from accepted traffic engineering and current County standards. The traffic engineering component of the Ward Street Environmental Assessment (EA) study has applied these "hard" quantitative engineering standards in assessing alternative plans for improving the corridor, which has fed into the evaluation process of the Environmental Assessment. Other more subjective measures including social and environmental impacts, and non-auto community access were also considered in the EA process.

Initially the transportation planning component of the Ward Street EA study focused on assessing improvement options for the Ward Street corridor. This initial phase of the study spent considerable time developing detailed corridor traffic volumes representative of summer peak period traffic demands for 2017. This was followed by the preparation of 2031 forecasts of future corridor volumes utilizing data from other corridor studies (completed by either the County or to support development applications on Ward Street) and the current County Transportation Master Plan (TMP).

Alternative Ward Street corridor improvement options including multiple lane configurations were tested against ten representative intersections in the corridor for typical Summer PM and Saturday mid-day peak periods of traffic demand. The assessment process involved the detailed testing of 80 intersection assessments over a full range of alternative planning scenarios. Each intersection was evaluated using current Highway Capacity Manual (HCM) *measures of effectiveness* (moe) and County standards for intersection operations. The analysis demonstrated that by 2031 no available option for Ward Street would provide sufficient future road capacity.

The traffic component of the Ward Street EA study was then expanded to prepare by-pass forecasts to assess the impact of a by-pass on Ward Street corridor operations. This analysis determined that a two lane by-pass will provide the future additional road capacity that will be required by 2031. With this additional capacity, the Ward Street corridor intersections are forecast to operate at Levels of Service that meet current County standards. It is noted that planning for the by-pass and the future County Road 14/County Road 18 roundabout should include improvements and reconfiguration of commercial entrances at the north end of the corridor.

The comprehensive traffic analyses carried out for the Ward Street EA study has considered a full and representative range of corridor improvement options. Some of these options will provide modest improvements in road capacity, however none will meet 2031 road capacity requirements. The traffic analysis for the Ward Street EA has clearly shown that the County Road 18 Bridgenorth Causeway Link (Bridgenorth By-Pass) can provide this capacity and it will be required by 2031.